

Title (en)

Process for carrying out electrochemical reactions using a microreactor

Title (de)

Verfahren zur Durchführung elektrochemischer Reaktionen in einem Mikroreaktor

Title (fr)

Procédé pour réaliser des réactions électrochimiques dans un microréacteur

Publication

EP 1217099 A2 20020626 (DE)

Application

EP 01129827 A 20011214

Priority

DE 10064417 A 20001221

Abstract (en)

Microreactor has two electrodes plane-parallel to each other with at least one electrode having an insulating layer connected to its surface. Independent claims are also included for: 1) A process for the production of a microreactor comprises: (1) structuring the electrode surface by inserting grooves and bores into the electrode material; (2) forming a mask having recesses on sites on which the electrode surface is to be coated with insulating material and applying the insulating material by the mask onto at least one electrode surface and removing the mask or applying a flat insulating layer onto the electrode surface and partially removing the insulating coating material; (3) optionally forming heat exchanger elements by structuring heat exchanger plates analogous to the first step; (4) joining both electrodes and optionally the heat exchanger elements and/or separating walls; and (5) connecting a current supply and optionally sensors. 2) A modular system for producing the microreactor.

Abstract (de)

Die Erfindung betrifft einen Mikroreaktor für elektrochemische Umsetzungen, welcher mindestens zwei planparallel zueinander angeordnete Elektroden (2,3) aufweist, dadurch gekennzeichnet, dass mindestens eine Elektrode mit einer definiert ausgestalteten, fest mit der Elektrodenoberfläche verbundenen Isolationsschicht (8) versehen ist. <IMAGE> <IMAGE>

IPC 1-7

C25B 9/06

IPC 8 full level

B01J 19/00 (2006.01); **C25B 9/17** (2021.01)

CPC (source: EP)

B01J 19/0093 (2013.01); **C25B 9/17** (2021.01); **B01J 2219/00783** (2013.01); **B01J 2219/00819** (2013.01); **B01J 2219/00853** (2013.01); **B01J 2219/00867** (2013.01); **B01J 2219/00869** (2013.01); **B01J 2219/00871** (2013.01); **B01J 2219/00873** (2013.01)

Cited by

DE102009019575A1; DE102005034642B3; US8146650B2; WO2006061605A1; WO02083988A3

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1217099 A2 20020626; **EP 1217099 A3 20020710**; **EP 1217099 B1 20050831**; AT E303461 T1 20050915; DE 10064417 A1 20020704; DE 50107272 D1 20051006

DOCDB simple family (application)

EP 01129827 A 20011214; AT 01129827 T 20011214; DE 10064417 A 20001221; DE 50107272 T 20011214